

Appendix B Botany

Special Status plants include Federally Proposed, Threatened, and Endangered (T&E); State Proposed, Threatened, and Endangered; and Bureau Sensitive (BSO), Assessment (BAO), Tracking (BTO), and Watch (MW). Vascular plants, lichens, bryophytes, and fungi are included in some or all of these categories. The Bureau of Land Management's policy (BLM Manual 6840.02) is to:

- 1) conserve T&E species and the ecosystems on which they depend,
- 2) ensure that actions authorized on BLM-administered lands do not contribute to the need to list any Special Status species under the provisions of the Endangered Species Act.

Survey and Manage (S&M) species, which include vascular plants, lichens, bryophytes, and fungi, are those identified under the Northwest Forest Plan that are closely associated with late-successional or old growth forests. They are species whose long-term persistence may be of concern and which may require mitigation measures to reduce the impacts of land management efforts. S&M species fall into one of six categories (A-F), which are based on rarity and practicality of conducting surveys.

Requirements for conducting pre-disturbance surveys and protecting sites differ by category (Table 1).

| Table 1. SURVEY AND PROTECTION GUIDELINES FOR SPECIAL STATUS PLANTS | | |
|--|--------------------------------|-------------------|
| Status | Pre-Disturbance Surveys | Protection |
| Federal T&E | Yes | Yes |
| State T&E | Yes | Yes |
| BSO | Yes | Yes |
| BAO | Yes | Yes |
| BTO, MW | Optional | Discretionary |
| S&M A, C | Yes | Yes |
| S&M B, D, E | No | Yes |
| S&M F | No | Discretionary |

188 vascular plants, 19 lichens, 1 liverwort, 21 bryophytes, and 49 fungi are included on the Medford Special Status plant list (including S&M species) as known to occur or suspected of occurring on the District. Special Status species documented to date in the Butte Falls Resource Area include 47 vascular plants, 9 lichens, 8 bryophytes, and 14 fungi.

Habitat

The proposed project area is located in the Lost Creek Watershed, on the western slopes of the Cascade Range. Most units are located on the north and west sides of Lost Creek Lake, with a few units on the southwest side of the lake. Elevation ranges from approximately 1,600 feet to 4,000 feet. Vegetation consists of a mosaic of plant communities, including conifer stands, mixed hardwood-conifer woodlands, oak woodlands, chaparral patches, open meadows, and

rocky scablands. Special habitats include rock outcrops and cliffs, riparian corridors, wet meadows, and seeps. The project area contains suitable habitat for many Special Status and Survey and Manage vascular plants, lichens and bryophytes, although past surveys discovered few species or sites (Lost Creek Watershed Analysis, p. 24).

Surveys

Vascular and non-vascular (lichen and bryophyte) plant surveys were conducted on approximately 800 acres of proposed timber sale units and 3,382 acres of proposed fuels treatment units in the Flounce Around project area in 1999, 2000, 2002, and 2003.

Surveys were conducted by professional botanists using intuitively controlled transect methodology, according to survey protocols for S&M species. Surveys were focused on locating Threatened and Endangered, Bureau Sensitive, Bureau Assessment, and Survey and Manage category A and C species likely to occur in the project area, although incidental sightings of Bureau Tracking, Medford Watch, and S&M category B, D, E and F species were also documented. Comprehensive species lists of vascular plants, lichens, and bryophytes were compiled for each section surveyed. Locations and extent of noxious weed populations were also documented during vascular plant surveys. These sites will be added to the Medford District noxious weed database.

Surveys for Special Status and S&M fungi were not required because they are in categories for which pre-disturbance surveys are not required. Only one S&M fungi, *Bridgeoporus nobilissimus*, is a category A species which requires pre-disturbance surveys for projects within its range and containing suitable habitat. *Bridgeoporus nobilissimus* has not been found south of the Salem District BLM. It is a conk that is found in mesic to wet microsites on snags, stumps, or dead portions of large, live Pacific silver fir and noble fir (Hibler 1998, p 3-5). The Flounce Around project area is outside the range and does not contain suitable habitat for this species. When Special Status or S&M fungi are discovered during other plant surveys, they are protected according to management directions.

Threatened and Endangered (T&E) Plants

Three Endangered plants occur in the Butte Falls Resource Area - *Fritillaria gentneri*, *Limnanthes floccosa* ssp. *grandiflora* and *Lomatium cookii*. The Flounce Around project area is located outside the ranges of all three species. However, even though the project area is outside their ranges, surveys conducted for other Special Status plants during the appropriate survey season would have detected and documented the endangered plants, if they were present in the project area. No sites of these three T&E species were discovered during surveys in the project area.

Special Status and Survey and Manage Plants

Surveys conducted in the Flounce Around project area discovered 19 Special Status and 3 Survey and Manage plants (Table 2).

Four lichens which previously had S & M status – *Bryoria tortuosa*, *Dendroscopaulon intricatum*, *Calicium gloucellum*, and *Calicium viride* – were also discovered in the Flounce Around project area. These species were removed from the S&M list in the 2002 Annual

Species Review (USDA and USDI 2003). The sites were flagged and documented during surveys conducted in 2002 and early 2003, but would not be protected in the proposed project because they were removed from the list prior to completion of the EA and signing of the Record of Decision.

| Table 2. Special Status and S&M Plants Documented in the Flounce Around Project Area | | | | |
|---|---------------------------|-----------------|-----------------|------------------------|
| Scientific Name | Common Name | Lifeform | Status | Number of Sites |
| <i>Carex livida</i> | livid or pale sedge | Vascular plant | Assessment | 1 |
| <i>Carex serratodens</i> | Saw-tooth sedge | Vascular plant | Assessment | 5 |
| <i>Cirsium ciliolatum</i> | Ashland thistle | Vascular plant | Sensitive | 2 |
| <i>Crumia latifolia</i> | | Bryophyte | Assessment | 1 |
| <i>Cypripedium montanum</i> | mountain lady's-slipper | Vascular plant | Tracking, S&M C | 2 |
| <i>Fabronia pusilla</i> | | Bryophyte | Tracking | 13 |
| <i>Funaria muhlenbergii</i> | | Bryophyte | Assessment | 8 |
| <i>Hedwigia detonsa</i> | | Bryophyte | Watch | 2 |
| <i>Leptogium cyanescens</i> | | Lichen | S&M A | 1 |
| <i>Lewisia cotyledon</i> var <i>howellii</i> | Howell's lewisia | Vascular plant | Tracking | 2 |
| <i>Limnanthes floccosa</i> ssp <i>bellingeriana</i> | Bellinger's meadowfoam | Vascular plant | Sensitive | 2 |
| <i>Lithophragma heterophyllum</i> | hillside woodland star | Vascular plant | Tracking | 5 |
| <i>Navarretia heterandra</i> ** | Tehama pincushion plant | Vascular plant | Assessment | 1 |
| <i>Pannaria saubinettii</i> ** | | Lichen | S&M F | 2 |
| <i>Perideridia howellii</i> | Howell's yampah | Vascular plant | Tracking | 7 |
| <i>Plagiobothrys glyptocarpus</i> | sculptured popcorn flower | Vascular plant | Assessment | 2 |
| <i>Plectania milleri</i> + | | Fungi | Tracking | 3 |
| <i>Ribes inerme</i> var <i>klamathense</i> | Klamath gooseberry | Vascular plant | Tracking | 1 |
| <i>Scribneria bolanderi</i> | Scribner's grass | Vascular plant | Tracking | 24 |
| <i>Tortula subulata</i> | awl-leaved tortula moss | Bryophyte | Tracking | 28 |
| <i>Tripterocladium leucocladulum</i> | | Bryophyte | Assessment | 1 |
| **Pending verification; + unverified sites | | | | |

Species Descriptions

Carex livida (livid or pale sedge) – 18 previously documented sites in the Medford District. The range includes disjunct populations in Pacific States and eastern U.S. Typical habitat in the Cascades is in wet meadows on volcanic substrates. The site in Flounce Around is located outside a proposed unit.

Carex serratodens (saw-tooth sedge) – 18 previously documented sites in the Medford District. Endemic to southwestern Oregon and the Sierra Nevada and Coast Ranges of California. Typical habitat is in moist meadows and rocky places near streams and seepages. All sites in Flounce Around located in hand treatment fuels reduction units.

Cirsium ciliolatum (Ashland thistle) – 21 documented sites in the Medford District. Endemic to the Klamath Mountains in northern California and southern Oregon. First documented in the Butte Falls Resource Area in 2002. Occurs in open woodlands. Two sites documented in Flounce Around, both in hand treatment fuels reduction units in Oregon white oak woodlands.

Crumia latifolia – 74 sites of this bryophyte previously documented in the Medford District. Endemic to the western U.S. and South Dakota. Typical habitat is on rocks in perennial or intermittent streams. The site in Flounce Around is in a stream in an open meadow, at the edge of a hand treatment fuels reduction unit.

Cypripedium montanum (mountain lady slipper) – 149 sites documented in the Medford District. Has both Bureau Tracking and S&M status. Endemic to western North American where it is widely distributed, but most populations contain less than ten plants. Autotrophic orchid that occurs in a broad range of habitats and soil substrates (including ultramafic) between 1,500 and 6,500 feet elevation, but usually from 2,500-4,000. Habitats include mostly northerly aspects with mixed conifer or evergreen/oak woodlands, often with 60-80% canopy closure. Two sites documented in Flounce Around, one in a unit that was dropped and one in a hand treatment fuels reduction unit.

Fabronia pusilla – 10 sites documented in the Medford District. Range includes British Columbia, Washington, Oregon, Idaho, California, Arizona, and Colorado. Typical habitat in the Butte Falls Resource Area is rock outcrops in xeric, harsh sites of Oregon oak woodlands, meadows, and chaparral. Thirteen sites found in Flounce Around, all in hand treatment fuels treatment units, except one site in a unit that would be slashbusted under Alternatives 2 and 3.

Funaria muhlenbergii – 11 sites previously documented in the Medford District. Range includes Washington, Oregon, California, Arizona, and Utah. Typical habitat in the Butte Falls Resource Area is on soil in rocky, xeric sites in ceanothus brushfields, meadows, and oak woodlands. Populations consist of few individuals and are generally shaded by rock outcrops. Eight sites documented in Flounce Around – seven in hand treatment units and one in a fuels treatment unit that was dropped.

Hedwigia detonsa – 3 sites of this bryophyte previously documented in the Medford District. Only recently documented in Oregon on the Medford District, more common in California. Grows on rock. Two sites documented in Flounce Around, both found on

rocks in rocky meadows next to the forest edge. One unit is proposed for hand treatment and one is proposed for density management.

Leptogium cyanescens - The site in Flounce Around is the only documented site in the Medford District. The range of this lichen is all Physiographic Provinces in the Northwest Forest Plan area with the exception of the California Cascades and Eastern Oregon and Washington Cascades. It occurs on bark or rotten logs or hardwood trees, or on rocks in mixed conifer and Douglas-fir stands, and in maple and willow thickets in riparian and upland habitats. It was found in Flounce Around on rock in a density management unit.

Lewisia cotyledon var. *howellii* (Howell's lewisii) – 65 sites previously documented in the Medford District. Endemic to southwestern Oregon and Shasta County in northern California; rare throughout its range. Typical habitat is on rock outcrops or canyon walls near oak woodlands. Two sites documented in Flounce Around on cliff faces in fuels treatment units.

Limnanthes floccosa ssp. *bellingeriana* (Bellinger's meadowfoam) – 28 sites documented in the Medford District. Endemic to Jackson County. Closely related to the Endangered species *Limnanthes floccosa* ssp. *grandiflora*, which occurs only on the Agate Desert. Blooms in April and May in vernal wet areas in rocky meadows with shallow soils. Two sites discovered in Flounce Around, both in hand treatment fuels reduction units.

Lithophragma heterophyllum (hillside woodland star) – 97 sites previously documented in the Medford District. Endemic to California and southwestern Oregon. Typical habitat is in shaded oak woodlands or mixed hardwood-conifer forests. All sites in Flounce Around are in hand treatment fuels reduction units.

Navarretia heterandra (Tehama pincushion plant) – Only recently discovered in the Medford District. Specimens will be sent to a specialist for verification, but are assumed to be correctly identified until verification is received. Both sites in Flounce Around are in hand treatment fuels reduction units.

Pannaria saubinettii – 2 sites previously documented in the Medford District. West coast endemic, common in the western Cascades. Typical habitat is in moist or wet forests, in deep shade to somewhat open sites, low to mid elevations. Grows on bark, wood, or rock. Both Flounce Around sites are in hand treatment fuels reduction units. Specimens have been sent to the S & M lichen taxa expert for verification. This species is difficult to identify and resembles other more common species.

Perideridia howellii (Howell's yampah) – 69 sites previously documented in the Medford District, although many more undocumented sites exist. West coast endemic. Habitat is along streambanks and in wet meadows in open oak woodlands. All sites documented in Flounce Around are along seepy, sometimes intermittent streams in hand treatment fuels reduction unit.

Plagiobothrys glyptocarpus (sculptured popcorn flower) – 27 sites previously documented in the Medford District. Endemic to northwestern California and Jackson County, Oregon. Typical habitat is in moist places in grasslands and woodlands. One site documented in a hand treatment fuels unit that was dropped.

Plectania milleri – Approximately 80 sites previously documented in the Medford District. Was an S&M fungus until it was removed during the 2002 Annual Species Review, but it remains a Tracking species. The known range includes southwestern Oregon, Mount Hood National Forest, and Idaho. It typically grows on duff in late-successional or old-growth forests. Three sites were originally reported in Flounce Around. Two are located within and one outside a density management unit.

Ribes inerme var *klamathense* (Klamath gooseberry) – 18 sites previously documented in the Medford District. Endemic to northwestern California and southwestern Oregon. Typical habitat is in wet meadows at forest edges. The site in Flounce Around is outside the proposed units.

Scribneria bolanderi (Scribner's grass) – 40 sites previously documented in the Medford District, but has been under-reported. Endemic to western U.S. Typical habitat in the Butte Falls Resource Area is on xeric sites with shallow soils and basaltic rock outcrops. Sites in Flounce are in fuels reduction units. Some sites cover several acres, but have scattered individual stems.

Tortula subulata – 222 sites previously documented in the Medford District. Range is west coast of North American from B.C. to California. Habitat is on soil, often in disturbed sites such as upturned root wads, roadsides, and trails. 21 sites were documented in Flounce Around in all types of treatment units.

Tripterocladium leucocladulum - At least 80 sites previously documented in the Medford District. Western North American endemic found on soil, rock, or trees. One site documented in Flounce Around in hand treatment fuels reduction unit.

Protection Measures

Protection measures are implemented to conserve T&E species and populations, ensure that actions authorized, funded or carried out by the BLM do not contribute to the need to list any Sensitive or Assessment plant species (BLM Manual 6840.02), and manage known sites of S&M species in categories A-E. Protection measures for S&M species follow management recommendations, where available. Protection of Bureau Tracking, Medford Watch, and S&M category F species is not required, but is discretionary (Table 1). Species in these categories for which many sites are known and populations across their ranges appear to be stable, are generally not protected. It is assumed that the Reserve System (LSRs, Riparian Reserves, Owl Cores, etc.) provides an adequate level of protection for those species. Species for which few sites are known are generally protected.

Protection measures are developed utilizing existing management recommendations developed by taxa experts and adopted by the BLM and US Forest Service, other reference sources, and professional experience with the species and the resource area. Buffer sizes are determined by considering the proposed treatment, the environmental requirements of the species, and the ecological conditions of the site, including plant community, aspect, slope, and canopy closure.

Protecting plants from direct impacts is the first priority. For some species, maintaining canopy cover and microsite conditions is also important and buffers are established around the plant site. Other species and sites may not be negatively affected by and may even benefit in the long-term from pro-active management during periods of dormancy or senescence, such as fall burning or thinning that would enhance habitat or reduce competition from brush, trees, or other herbaceous species. In these instances, smaller buffers or delaying management activities until plants are dormant would be adequate. Only sites within treatment units would be buffered.

Environmental Impacts

Threatened and Endangered Plants

The proposed projects would have No Effect on *Fritillaria gentneri*, *Lomatium cookii*, or *Limnanthes floccosa* ssp *grandiflora* because no plants occur within the proposed units.

Cumulative Effects Common to All Alternatives

Land ownership in the Lost Creek Watershed is checkerboard and includes private land as well as land managed by the government. Past management activities including logging, road building, agriculture, and recreational and residential development likely affected rare plants and resulted in a loss of suitable habitat within the Flounce Around project area.

Because of these past activities, some mature forests that had structural complexity and species diversity were converted to early seral, single-age stands. In addition to directly impacting Special Status plants, these actions fragmented habitats, isolated populations, and resulted in reduced gene flow and loss of species diversity. The Timbered Rock Fire in the adjacent Elk Creek Watershed and the Wall Creek Fire in the Trail Creek Watershed, which both burned in 2002, also resulted in a loss of some late seral habitat and possibly mortality of Special Status plants.

Although there has been a reduction in late seral conifer stands on BLM-administered land due to past timber harvest and fires, the Northwest Forest Plan and Medford Resource Management Plan provide a reserve system across the landscape that is intended to provide for protection and development of late seral habitat and protection and expansion of Special Status plants.

Plant communities have also been altered over the last 100 years due to fire suppression and changes in fire regimes and ecosystem processes. Fires often burn unequally over a landscape, creating structural complexity that supports biodiversity. As fuels build up, the risk increases of high severity fires, which could result in mortality or damage to rare plants. Special Status plants that require disturbance openings or earlier seral stages, or depend on heat or chemicals that fire generates for seed germination, may have declined or suffered reduced population vigor as a result of fire exclusion.

Noxious weeds have also impacted plant communities in the Lost Creek Watershed, especially more open ones, like oak woodlands and meadows. Non-native plants and noxious weeds compete with native species, resulting in reduced species diversity. Road construction, logging activities, and other disturbances occurring in the future will likely continue to introduce and spread noxious weeds in the watershed. Noxious weeds are treated on BLM-administered land when they are reported.

It is expected that timber harvest, grazing, road building, and other activities will continue in the future on both private and BLM-administered land in the watershed. It is also assumed that Special Status plants that occur in the area would only be protected on BLM-administered land.

Alternative 1 – No Action

Direct, Indirect and Cumulative Effects

Under Alternative 1, none of the proposed activities would be implemented and no direct effects to Special Status or S&M plants would occur. Current trends would continue with more fuels build-up and fire exclusion in plant communities that have historically had frequent, low intensity fires.

Indirect and cumulative effects to habitats and Special Status plants could result from not implementing density management and fuels reduction treatments. A continued build up of fuels could result in more intense and severe fires in the event of wildfire. High severity fires cause more extensive damage to plants than do lower severity fires. Vascular plants, such as *Cypripedium montanum* and *Limnanthus floccosa* ssp. *bellingermaniana*, and lichens and bryophytes, such as *Funaria muhlenbergii*, and *Tripterocladium leucocladulum*, could suffer direct mortality or damage to underground plant parts, seeds, or spores. Recovery of rarer plants from high severity fire could take longer or may not occur, compared with their response to lower severity fire.

Some Special Status plants, such as *Cirsium ciliolatum* are dependent on earlier seral stages or more open conditions. These fire-dependent species could be shaded out by encroaching vegetation in oak woodlands and meadows or may suffer reduced population vigor with continued fire exclusion.

The status of species that occur on rock outcrops, such as *Fabronia pusilla* and *Lewisia cotyledon* var. *howellii*, would not change under the No Action Alternative because habitat conditions would remain the same in the foreseeable future.

Alternative 2

Direct and Indirect Effects

Terrestrial Special Status plants (e.g. *Cypripedium montanum*, *Limnanthus floccosa* ssp. *bellingermaniana*, *Cirsium ciliolatum*, and *Funaria muhlenbergii*) could be directly impacted and adversely affected by ground-based machinery used in timber harvest or fuels reduction activities or from burning handpiles. However, no direct effects from the proposed activities would occur to the Bureau Sensitive, Assessment, or S&M category C plants that occur in the project area because sites that were discovered would be protected with buffers. Some Bureau Tracking species would also be protected by buffers or occur in areas that would not be impacted by the proposed activities.

Species associated with later-successional conditions, such as *Cypripedium montanum*, could be indirectly affected by changes in environmental conditions, such as increased light and temperature and reduced moisture, caused by removing canopy cover during timber harvest or

fuels reduction activities. The *Cypripedium montanum* site is located in a hand treatment fuels unit where mostly understory trees would be thinned. A 100 foot buffer around the site would maintain microsite conditions and protect the plants from direct impacts during treatment.

Under Alternative 2, approximately 100 acres would be regeneration harvested, leaving between 10-40% canopy cover and returning the stands to an early seral condition. There would be no direct impacts to any Special Status or S&M plants because none were discovered in these units. The impact of regeneration harvest would be removal of late seral habitat for potential expansion of late-successional associated species. However, the scale of this loss of late seral habitat is very small in relation to the total acres in the watershed - .004% of the entire watershed and .009% of BLM-administered land in the watershed.

Under Alternative 2, 279 acres would be treated with a slashbuster to reduce fuels. There would be no direct impacts to Special Status or S&M plants because all areas were surveyed and sites would be protected or required slashbuster treatment could potentially create some indirect effects to Special Status plants and native vegetation by displacing soil and creating openings for noxious weed invasion. However, project design features, described under "Noxious Weeds and Fuel Hazard Reduction," would reduce these effects by minimizing ground disturbance, seeding disturbed areas with native grass seed, and monitoring and treating areas for noxious weeds after completion of management activities. The scale of this disturbance is also small at the watershed level - .01% of the entire watershed and .02% of BLM-administered land.

Special Status and S&M species that grow on rocks (e.g. *Fabronia pusilla*, *Hedwigia detonsa*, *Lewisia cotyledon* var *howellii*, and *Tripterocladium leucocladulum*), in the protection of rocks (*Funaria muhlenbergii*), and in riparian areas (*Carex livida*, *Carex serratodens*, *Perideridia howellii* and *Crumia latifolia*) would not be affected by the proposed activities. However, all Bureau Sensitive and Assessment and S&M category C species would be buffered. Buffer sizes would vary, depending on the species, site conditions, and the proposed activities.

Another potential indirect effect of the proposed activities on Special Status vascular plants would be an increase in noxious weeds. Construction of skid roads and landings, increased vehicular traffic in the project area, and movement of equipment in, out, and within timber sale and slashbuster units could result in the introduction or spread of noxious weeds into areas not already occupied. However, project design features, described under "Noxious Weeds" were designed to minimize these possible effects.

Thinning forest and woodlands would provide beneficial indirect effects to some Special Status plants that require more light, such as *Cirsium ciliolatum* and *Limnanthes floccosa* ssp. *bellingermana*. Maintaining more open conditions in oak woodlands and meadows by thinning or prescribed burning would preserve these habitats, contribute to plant diversity, and provide habitat for Special Status plants associated with these plant communities. Reducing fuel loads would also reduce the risk of mortality of Special Status plants from high severity fire that could occur in the event of a wildland fire.

Cumulative Effects

See Cumulative Effects Common to All Alternatives. Alternative 2 includes both regeneration harvest and slashbuster treatment, which both have the potential of causing some indirect effects to Special Status plants. However, project design features would reduce impacts from

the proposed slashbuster treatment by minimizing soil disturbance and spread of noxious weeds. The proposed activities would not contribute to the need to list any Special Status plants or jeopardize the viability of S&M species that occur in the proposed units.

Alternative 3

Direct and Indirect Effects

Direct and indirect effects from Alternative 3 would be the same as those described in Alternative 2, with the exception that no potential indirect effects to Special Status plants would occur as a result of losing approximately 18 acres of late seral habitat during regeneration harvest. There would be no direct effects to Special Status Sensitive, Assessment, or S&M category C plants because all sites that occur in proposed units would be protected.

Cumulative Effects

See Cumulative Effects Common to All Alternatives. Alternative 3 includes slashbuster treatment, but no regeneration harvest. Project design features would reduce impacts from the proposed slashbuster treatment by minimizing soil disturbance and spread of noxious weeds. There would be no loss of late seral habitat during regeneration harvest. The proposed activities would not contribute to the need to list any Special Status plants or jeopardize the viability of S&M species that occur in the proposed units.

Alternative 4

Direct and Indirect Effects

Direct and indirect effects from Alternative 4 would be the same as those described in Alternative 2, with the exception that no potential indirect effects to Special Status plants or native vegetation would occur as a result of slashbuster treatment. There would be no direct effects to Special Status Sensitive, Assessment, or S&M category C plants because all sites that occur in proposed units would be protected.

Cumulative Effects

See Cumulative Effects Common to All Alternatives. Alternative 4 includes regeneration harvest, but no slashbuster treatment. However, the scale and magnitude of losing approximately 100 acres of late seral habitat is small at the watershed level. This alternative would not contribute additional cumulative effects to Special Status plants. The proposed activities would not contribute to the need to list any Special Status plants or jeopardize the viability of S&M species that occur in the proposed units.

Alternative 5

Direct and Indirect Effects

Direct and indirect effects from Alternative 5 would be the same as those described in Alternative 2, with the exception that no potential indirect effects to Special Status plants or

native vegetation would occur as a result of regeneration harvest or slashbuster treatment. There would be no direct effects to Special Status Sensitive, Assessment, or S&M category C plants because all sites that occur in proposed units would be protected.

Cumulative Effects

See Cumulative Effects Common to All Alternatives. The proposed activities would not contribute to the need to list any Special Status plants or jeopardize the viability of S&M species that occur in the proposed units.

REFERENCES CITED

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